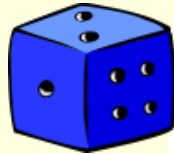


1.4 Simplifying Rational Expressions



$$= \frac{36x^3}{42x^2}$$



$$\frac{2r-4}{r-2}$$

$$\frac{2(\cancel{r-2})}{(\cancel{r-2})}$$

$$-\frac{6x}{7}$$

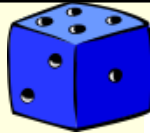
$$2$$



$$\frac{x-4}{3x^2-12x}$$

$$\frac{\cancel{x-4}}{3x(\cancel{x-4})}$$

∴



$$\frac{x+6}{x^2+5x-6}$$

$$\frac{\cancel{x+6}}{(\cancel{x+6})(x-1)}$$





$$\frac{v^2 - 7v - 30}{v^2 - 5v - 24}$$



$$\frac{v^2 - 5v - 14}{v^2 + 4v + 4}$$

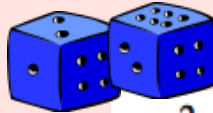
$$\frac{\cancel{(v+3)}(v-10)}{\cancel{(v+3)}(v-8)}$$

$$\frac{v-10}{v-8}$$





$$\frac{x^2 + 2x - 80}{2x^3 - 24x^2 + 64x}$$



$$\frac{3r^2 - 39r + 90}{r^2 - 3r - 70}$$

$$\frac{(x-8)(x+10)}{2x(x^2-12x+32)}$$

$$\frac{(x-8)(x+10)}{2x(x-8)(x-4)}$$

$$\frac{x+10}{2x(x-4)}$$

$$\frac{x+10}{2x(x-4)}$$



GEOMETRIC PROBABILITY

Region B is contained in Region A . An object is tossed onto Region A and is equally likely to land on any point in the region.

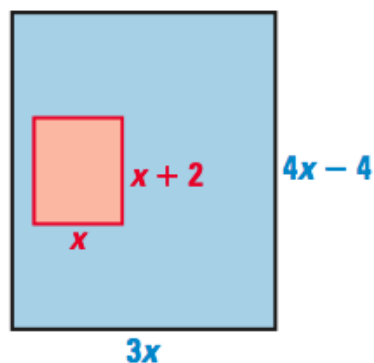
The **geometric probability** that it lands in Region B is

$$P = \frac{\text{Area of Region } B}{\text{Area of Region } A}.$$



A coin is tossed onto the large rectangular region shown at the right. It is equally likely to land on any point in the region.

- a. Write a model that gives the probability that the coin will land in the small rectangle.
- b. Evaluate the model when $x = 10$.



Solution for A

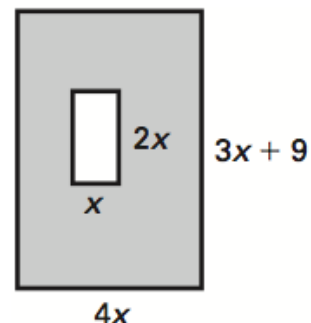


Solution for B



A coin is tossed onto the large rectangular region shown at the right. It is equally likely to land on any point in the region.

- Write a model that gives the probability that the coin will land in the small rectangle.
- Evaluate the model when $x = 4$.



Solution for A



Solution for B

